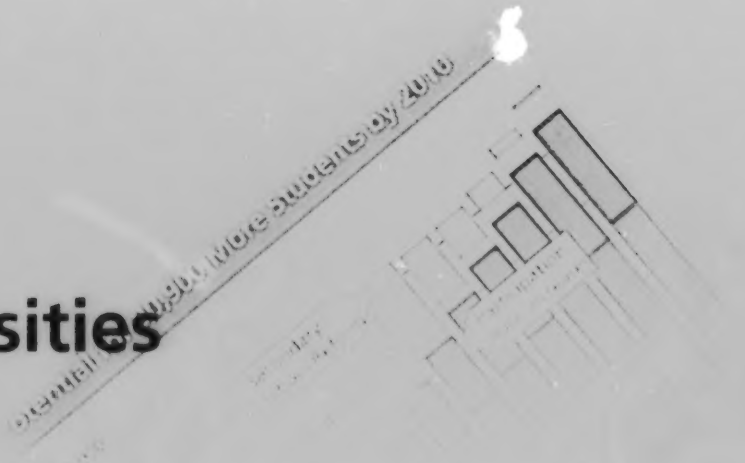
An estimated 90,000 additional full-time students will seek admission to Ontario universities over this decade. Will we be able to meet their expectations?

Access to Excellence:

A Progress Report from Ontario Universities



COUNCIL OF
ONTARIO UNIVERSITIES

CONSEIL DES
UNIVERSITÉS DE L'ONTARIO

102-02735/

The surge in demand for university education is now just two years away, and participation rates are already starting to climb. Today, over 320,000 full- and part-time students are studying at Ontario universities. It is estimated that this number will increase by close to 90,000 over this decade. The "double cohort," comprising students from the former secondary school program and those from the new curriculum, will contribute significantly to the increase, with some 33,500 additional full-time students expected to arrive on university campuses at the same time.

EXECUTIVE SUMMARY

The provincial government and Ontario universities have been working closely together over the past three years to plan for the impending enrolment surge. Considerable progress has been made to help ensure that every qualified and motivated student has access to excellence in higher education. Of particular significance was the government's SuperBuild program, which represents the largest capital investment in Ontario universities in over 30 years and provides the means for universities to begin increasing space for growing numbers of students. Budget 2000 provided new investment in research, capital and student assistance.

The government announced in its 2001 budget that it will increase operating grants in direct proportion to the projected enrolment growth, and allocated additional capital to help address maintenance backlogs. With the budget's multi-year commitment to full funding, and assuming that actual enrolments are broadly in line with projections, Ontario universities now have the basic enablers to deliver on the *access* part of the access to excellence goal.

Major progress has been made in addressing space requirements, but we must not lose sight of the fact that there is still a great deal to be accomplished if we are to provide access to a truly effective learning environment.

What *really* matters in creating an effective learning environment for students? There are common benchmarks, and they are the very ones that Ontarians identified in a recent survey. They are also the roots of the questions that are being posed with increasing regularity as the double cohort of students are readying for the year 2003 when they arrive on university campuses.

- Will there be enough well-qualified professors?
- Will I be able to get into the university and program of my choice?
- Will classrooms and laboratories be adequately equipped?
- Will libraries be well-stocked and technologically current?
- Will there be a wide selection of programs and courses from which to choose?
- Will I have the opportunities to interact with and work alongside professors and leading researchers?
- Will there be adequate counselling and support for career planning?

These questions reflect the common expectations of Ontario students and their parents and the question remains: can Ontario universities deliver?

The capacity of Ontario universities to deliver an effective educational experience is stretched to the limit. Over the past decade, Ontario universities have taken dramatic steps to cope with the funding constraints that characterized the 1990s. Throughout reduction and retrenchment processes, which continue to this day, striving to preserve quality has remained the number one priority. Personnel have been reduced, administrative efficiencies have been introduced at individual university and system-wide levels, and securing new revenue sources and innovative partnerships have become standard operating practice in schools and departments across university campuses. (See page 8, "Is Effectiveness Really at Risk?")

To illustrate the extraordinary efforts that have been made to fill funding gaps, in 2000-2001 alone universities raised an estimated $420 million through partnerships. This represents a

365% increase over a 10-year period. The efficiency and resourcefulness of Ontario universities were given special mention by the government-appointed Investing in Students Task Force. The Task Force gave Ontario universities "a clean bill of health," noting that they are responsibly managed and cost efficient compared to other jurisdictions. At the same time, we know that public investment in higher education lags behind that in other jurisdictions. (See page 4 for the bar chart on Faculty-Student Ratios.)

When all these students arrive on Ontario university campuses, they will be placing their trust in our universities to provide them with the full range of experiences to challenge them academically and deepen their understanding of the world. We are collectively committed to providing all students with a quality education. We will not be in a position to achieve our shared goal unless we are prepared to ensure that students have access to highly qualified faculty and support staff; a full choice of programs and courses from which to choose; classrooms, laboratories and libraries that are equipped with up-to-date resources; and well-maintained campus spaces.

It is commonly acknowledged, and demonstrated by increasing participation rates, that a well-educated population is the key to a jurisdiction's economic competitiveness. If we were to fail to ensure that these human and physical resources are in place, we would disadvantage not only Ontario students, but the province as a whole.

University graduates achieve the highest employment rates across the entire higher education sector, and their incomes and contribution to the economy continue to grow with the level of education attained. It is clear that tomorrow's opportunities will belong to those jurisdictions with a highly educated population. Ontario universities are major contributors to economic growth and job creation, directly or indirectly sustaining more than 375,000 jobs, according to the findings of a recent report by Enterprise Canada Research. (See page 13 for summary.) Ontarians receive substantial, economic benefit from their long-term investment in Ontario universities – a benefit that is paid out annually to support economic growth and job creation in this province.

Ontario has made significant strides in preparing for the double cohort and the overall increase in student demand. The building blocks are firmly in place but further investment in the quality of education available at Ontario universities is needed to prevent a further erosion of the quality of education available to growing numbers of students. Students will expect it; parents will demand it; and working together, Ontario universities and government must deliver it.

While present day economic conditions present a challenge, it is important to maintain a focus on the future. An investment in the quality of learning experience that students receive at Ontario universities is an investment in the future economic well-being of the people of Ontario and this province.

Introduction

We know that a highly educated population is the key to economic competitiveness and societal well-being.

University graduates experience the economic advantages of a university degree first-hand. University graduates achieve the highest employment rates across the entire higher education sector, and incomes continue to grow with the level of education attained. It is clear that tomorrow's opportunities will belong to those who are the best educated and the most highly skilled. Our province's ability to sustain a vibrant economy and quality of life is dependent on the contributions of people whose education and skills span the full range of disciplines taught at our universities.

We also know that the surge in student demand for university education is now less than two years away. Today, over 320,000 full- and part-time students are studying at Ontario's universities. Will Ontario be ready to respond to the expectations of the additional thousands of students and parents who will be seeking opportunities at its provincially funded universities?

Evidence indicates that over the next nine years close to 90,000 additional full-time students will seek admission to Ontario universities:

- A factor that will contribute significantly to the increase is secondary school reform, which will result in the elimination of Grade 13.
- Students from the former secondary school curriculum and those from the revised curriculum will be seeking admission to Ontario universities at the same time.
- At its peak effect, secondary school reform could result in some 33,500 full-time students over and above regular enrolment levels.

As student numbers are growing, faculty numbers are declining:

- Evidence indicates that as many as 13,500 faculty will need to be hired at Ontario universities over this period.
- To appreciate the magnitude of this challenge, consider that these numbers exceed the total number of faculty teaching at Ontario universities today. How do we arrive at this number?
  - Record numbers of retirements alone will result in the need to recruit 7,500 new faculty;
  - 4,200 faculty will be needed to meet the enrolment expansion; and
  - 1,800 faculty will be needed to improve faculty-student ratios.

Adding to the difficulty of recruiting large numbers of faculty is the fact that the retirement trend is being mirrored at universities across North America, resulting in competition from virtually every jurisdiction. Ontario universities must be in a position to compete for talented faculty and, of equal importance, to withstand continuous attempts to lure talented faculty away from their campuses.

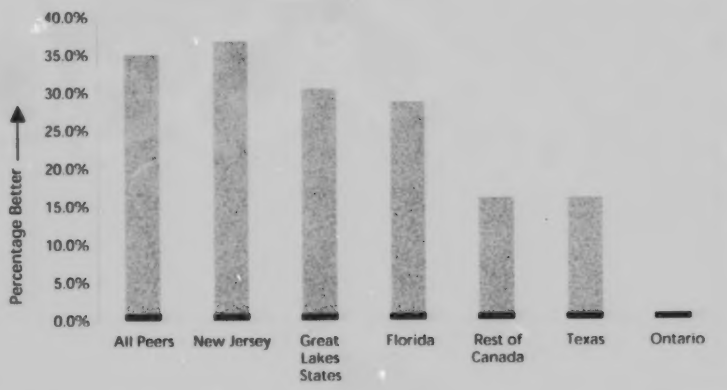
As the accompanying graph shows, the faculty-student ratio in the rest of Canada and the U.S. is superior to that in Ontario universities. For instance, peer institutions in New Jersey enjoy a faculty-student ratio that is 37% better than that in Ontario. This means that professors can teach smaller classes and spend more time with individual students.

Is faculty-student interaction really all that important to the quality of a student's learning experience?

One could readily obtain the answer to that question from virtually any student on virtually any university campus. Faculty-student interaction tops the list of internationally recognized benchmarks for quality in education.

Study after study indicates that, while many factors influence the quality of the learning experience, no one factor exceeds in importance students' interactions with faculty.

■ Faculty-Student Ratios Are Better in Other Jurisdictions (selected jurisdictions 1999-2000)



It is faculty who guide students' thinking through the relevant bodies of knowledge, who inspire them, and who challenge them to deepen their understanding.

Support staff are needed as well:

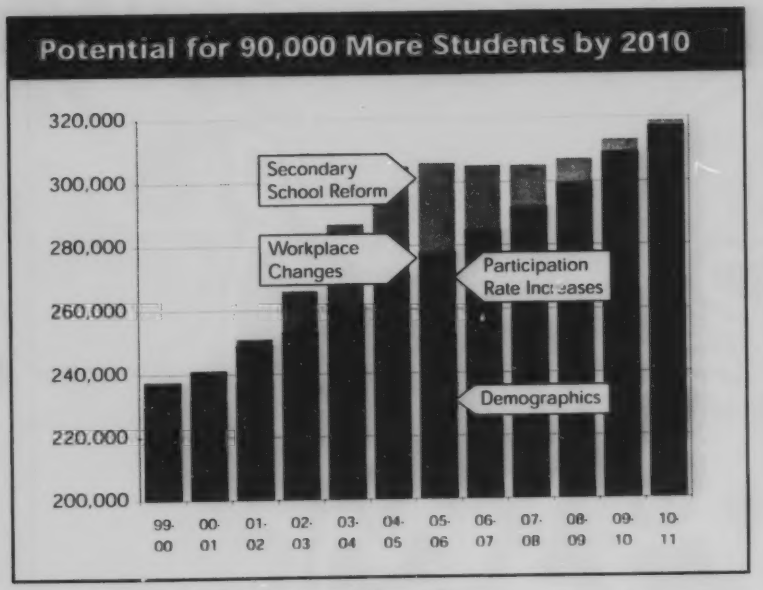
- Faculty rely on the support of a number of individuals who help ensure the delivery of excellence in the classroom and beyond. In turn, these individuals must work to ensure that adequate combinations of learning and support resources are available to students. These are the people who:
  - Staff libraries and provide academic, technical and computing support;
  - Counsel students and deliver learning-assistance programs;
  - Administer financial aid programs;
  - Ensure accuracy in admission and student records;
  - Staff residences and food service operations;
  - Maintain classrooms, laboratories and physical plants; and
  - Ensure sound academic planning and fiscal management.

As we look to the impending surge in enrolment, we can readily conclude that the number of existing staff will simply not be adequate to respond to the growing numbers of students. When we look at the breadth and condition of resources that these people are responsible for maintaining and delivering to students, we can quickly surmise why our challenges are even more significant.

The surge in enrolment is just two years away. Students and parents are concerned. They are placing their trust in the promise that every qualified and motivated student in this province will have access to a quality education.

How far have we come in the past three years? What remains to be achieved to meet the promise?

A Progress Report from Ontario Universities



Note: projected growth relates to full-time students only

Students, parents and their families are following the changing landscape of postsecondary education with a higher level of interest. While they were once focused on the question of what program to take and eligibility for admission to their university of choice, they are now more likely to be focused on questions such as: Will there be enough well-qualified professors and experienced academic and support staff? Will classrooms and laboratories be reasonably maintained and adequately equipped? Will there be sufficient technological resources to go around? How will universities be able to stock libraries to keep up with demand? Will there be enough residence space? Will our campuses continue to be safe?

These are good questions and are grounded in concern over the projected number of increased students who will be seeking enrolment at Ontario universities over this decade.

It is widely recognized that Ontario is entering the greatest increase in demand for university education in more than 30 years, with a projected increase of close to 90,000 full-time students seeking admission to Ontario universities over this decade.

Several factors are joining to create the surge in demand for postsecondary education, including increasing participation rates in

higher education, the growing 18- to 24-year-old population and the escalating workplace demands for upgrading of skills and knowledge. Indeed this year alone, it is expected that first-year admissions to universities will have increased by an estimated 4%, and over 60,000 full-time students will have entered university for the first time this fall. There are now over 320,000 full- and part-time students pursuing studies at our 17 institutions.

A factor that will contribute significantly to the projected increase is secondary school reform, which at its peak effect in 2004-2005 could result in the need to accommodate some 33,500 additional entering full-time, first-year students. This number is over and above the projected increase of 28,000 students due to growth in demographics and participation rates.

As we look to the projected enrolment increase and consider its implications – whether as parents, students, representatives of government or university administrators – we agree on two key points:

- We must remain committed to ensuring that every qualified and motivated student has access to postsecondary education.
- We must facilitate the delivery of educationally effective experiences across the full range of disciplines, at both the undergraduate and graduate level.

We must secure these objectives for our students, whose educational achievements will be directly linked to the future health of the provincial economy. Ontario's students are Ontario's future. Their ability to succeed in their programs of study will be directly linked to the effectiveness of their educational experiences in our institutions of higher learning.

HOW MUCH PROGRESS HAS BEEN MADE?

For the past three years, universities and the provincial government have been working closely together to plan for the increase in enrolment. Through this collaboration, significant strides have been made to help provide increased numbers of students with access to excellence. The SuperBuild program and the measures announced in the 2000 and 2001 Ontario budgets included substantial investments in Ontario universities.

The SuperBuild Program

On February 22, 2000, the government launched the SuperBuild investment program for the postsecondary sector. SuperBuild represents the largest public capital investment in Ontario's colleges and universities in more than 30 years. Over $890 million was allocated to begin increasing the institutions' capacity to provide spaces for the growing numbers of students.

2000 Ontario Budget Highlights

Capital

- $286 million added to 1999 Ontario Budget allocation of $742 million:
  - $231 million in new additional capital projects
  - $55 million in a "modernization fund" — distribution will be based on 1998-99 FTE enrolment
- capital expenditures for postsecondary education in the 1999 and 2000 budgets to total $1,028 million, approximately two-thirds of which is targeted to universities

Research

- Ontario Research and Development Challenge Fund doubled to $100 million for 2000-2001
- $30 million annual Research Performance Fund to support research overhead costs from Ontario-sponsored research at colleges, universities and research institutes
- expansion of Ontario Innovation Trust by $500 million to $750 million
- Premier's Research Excellence Awards doubled to $10 million for remaining seven years of program

Student Assistance

- increase in exemptions for study-period employment and scholarship income
- Ontario Work-Study Program doubled to $10.8 million
- increase in number and value of Ontario Graduate Scholarships

Budget 2000

The May 2, 2000 Ontario Budget provided new investment in research, capital and student assistance. The government, building on its impressive record of investment in research over the past three years, announced research initiatives that reflected the priorities that universities and government identified through the joint Working Group on University Research. The province expanded already successful programs, while also recognizing the overhead costs associated with university-based research.

The government also provided additional significant resources for the SuperBuild program, including a further $286 million to help universities and colleges build new classrooms and labs, and upgrade existing facilities, in preparation for the huge demand pressures expected over this decade.

The budget also provided measures to aid students and improve tax treatment of donations. Improved income exemptions allow students to keep more of the money they earn. The greater number and higher value of the Ontario Graduate Scholarships along with the expansion of the Ontario Work-Study Program help students meet their education cost.

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2001 Ontario Budget Highlights

Operating Grants

- $293 million in additional base funding (estimated) to colleges and universities by 2003-2004 — directly proportional to the anticipated enrolment growth.

Capital

- $100 million to address maintenance costs incurred at colleges and universities.

Research

- Two new Premier's Platinum Awards will be presented annually to help Ontario universities compete better globally in attracting and keeping world-class senior researchers.

Budget 2001

On May 9, 2001, the government announced in its budget that it will "increase operating grants to colleges and universities by an estimated $293 million by 2003-2004, directly proportional to the projected enrolment growth." It is anticipated that $223.6 million or 76% of the funding will be allocated to universities. This undertaking to provide full funding for increased enrolment gives Ontario universities the assurance they need to prepare for the growing numbers of students who will arrive on campuses and who will expect and deserve a high-quality education.

In addition to the operating funds, the government provided $100 million to colleges and universities to address maintenance backlogs.

With the budget's multi-year commitment to full funding, Ontario universities were given the basic enablers to deliver on the *access* part of the goal.

The concern now centres upon the shared responsibility of ensuring that all students have access to excellence – to an effective learning experience.

HOW DO WE DEFINE AN EFFECTIVE EDUCATIONAL EXPERIENCE?

Extensive research indicates that certain educational experiences are viewed as "effective" by virtually all students. Common benchmarks include the level of academic challenge, an active learning process, interactions with faculty, enriching educational experiences and resources, and a supportive campus environment.

Interested in what factors Ontarians consider to have the greatest influence on students' educational experience, the Council of Ontario Universities commissioned EKOS Research Associates to undertake a public opinion survey on Perceptions of Quality. The study found that high-level teaching skills, a wide choice of courses and programs, well-equipped classrooms and laboratories, and well-stocked libraries that make use of leading-edge technology stood at the top of the list.

IS EFFECTIVENESS REALLY AT RISK?

If one considers the government's significant investments and multi-year commitment to full funding for every newly enrolled student, how can the quality of students' educational experience be at risk?

By putting the cost of educating a student in the context of the quality inputs noted earlier, and considering some historical facts concerning government funding, we can readily see why the effectiveness of students' educational experiences is indeed at risk.

Current and past funding falls considerably short of past, current and projected cost increases. Consequently, most Ontario universities are forced to undertake yet further cost-cutting this year, on top of that implemented throughout the previous decade of cutbacks and retrenchment. These funding shortfalls have far-reaching implications for our current and future students, and place Ontario universities in a highly vulnerable position at a critical point in their planning for enrolment growth.

This situation has evolved over time. Its antecedence can be traced to the recession and fiscal imbalance at the beginning of the '90s. Subsequently, governments at both the federal and provincial levels began the long and difficult process of balancing their books. Drastic cuts were necessary. By 1998 the provincial economy began to rebound, and many hoped

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funding would keep pace with inevitable cost increases such as library acquisitions and information technology.

Grant increases have not kept pace with these growing base costs. As a consequence of funding restraints, provincial grants have not been provided for almost 6% of the full-time students enrolled in Ontario's universities. This grant inequity has affected more than half of Ontario's universities – some to far greater degrees than others. The result is a system-wide base funding shortfall of almost $100 million (almost half of the committed funding for growth), which has, and will continue to, seriously disadvantage students, including those within the double cohort, across Ontario's university community.

Absent provision for further increases in the base operating costs that help ensure that universities meet students' expectations for an effective learning experience (based on an inflation estimate of 2% per year), the purchasing power of the government's significant multi-year commitment to full average funding will be reduced by almost 50%.

At the same time, a number of studies have pointed to a growing problem with the maintenance of physical facilities. Current estimates of deferred maintenance in Ontario's universities run as high as $1.7 billion and require an annual infusion of $220 million simply to prevent further deterioration of the existing physical fabric. Over the past few years, the Ontario government has increased the amount of funding for Facilities Renewal to the point where it now stands at $26.7 million in annual grants plus an additional special allocation of one-time funding of $66.7 million in the current year. These monies are used effectively by the universities, but it is clear that there is a significant gap relative to the documented need. Moreover, it is evident that additional physical facilities are necessary to meet the anticipated student demand and increased research activity.

COSTS VERSUS REVENUE – THE BALANCE SHEET

The challenges are clear. More students demand more faculty, academic support and administrative personnel, and expansion of the many services and learning resources that constitute an effective learning environment. The difficulties associated with recruiting and retaining the best faculty will be influenced by several factors. At the same time, library resources, equipment and supplies are in urgent need of renewal, repair, replacement or augmentation, and fiscal restraints curtail the capacity of universities to enhance students' learning experiences through the strategic use of technology.

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> A.W. Bates, Managing Technological Change, Jossey-Bass 2000 (Reprinted from *A Time to Sow - Report from the Task Force on Learning Technologies*)

Significant resources are required to address the challenges. These resources are to be generated through shared responsibility by:

- The universities through increasing their revenue sources and continually searching for operating economies;
- By students and their parents through their tuition that will help offset some of the costs; and
- By government through operating grant adjustments that meet the increased student demand and recognize the value of investment in higher education as was demonstrated in the 2001 budget.

FUNDING FOR STUDENTS

Over the past decade:

- Total provincial funding (all earmarked funds as well as basic operating grants) decreased from $7,391 to $6,313 on a per student basis in nominal terms – a 14.6% reduction.
- After adjusting for a decade of inflation, the provincial funding per student actually decreased by 29.8% in real terms.
- If one adds provincial grants and tuition income together (and adjusts the tuition income for government-mandated student assistance that must be funded from the tuition increase), funding per student has decreased by 6.4% in real terms since 1990-1991.

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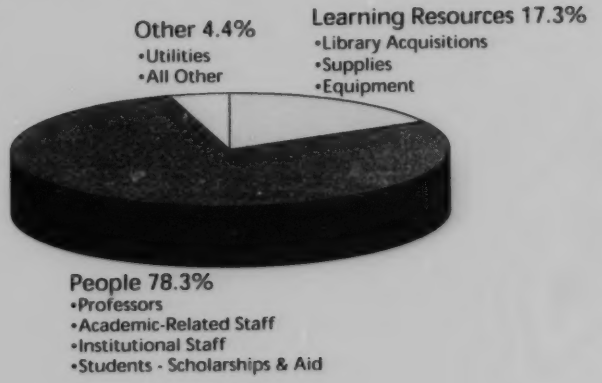
■ Operating Spending per Full-Time Student by Functional Area

Currently, Ontario universities spend an average of $13,200 per full-time student per year on a host of activities and services designed to provide the best possible learning environment with the funds available.

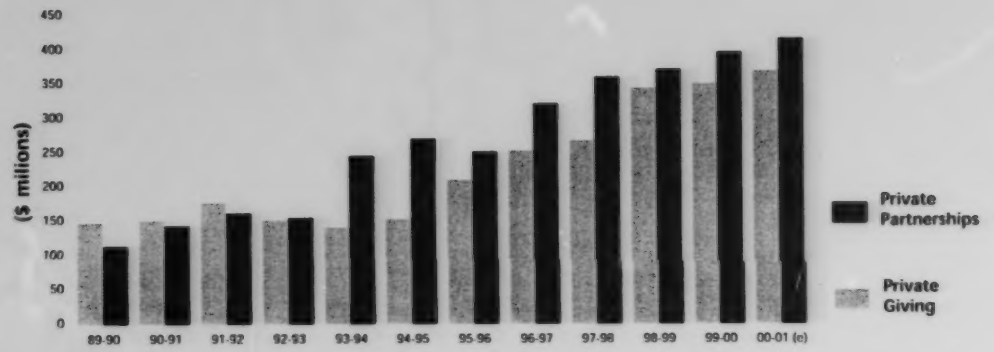
The revenue to support the spending takes the form of tuition (approximately 35%) and provincial grants (approximately 55%), with the remainder coming from other sources such as private giving, endowment income, investment income, private partnerships and other revenue. Over the past decade, the donations from private giving and private partnership have increased dramatically.

■ Operating Spending per Full-Time Student by Type of Expense



■ Operating Revenue per Full-Time Enrolment 1999-2000

Donations from Private Giving and Private Partnerships



Universities, their boards and staffs, have worked hard to increase revenue from other sources. Indeed 10 years ago, government grants accounted for approximately 75% of revenue; today it's approximately 55%. It is estimated that in 2000-2001, for example, universities raised an estimated $420 million in partnership with industry, foundations and non-government organizations. This represents a 365% increase since 1989-1990.

At the same time, we know that, relative to other jurisdictions, investment in higher education and overall resources devoted to universities in Ontario lags behind. Jurisdictional comparisons show that per student funding levels average 35% higher in a comparable peer group of universities in the U.S. (See chart on page 4.) That funding advantage translates directly into significantly better faculty-student ratios with all of the attendant benefits on the learning environment.

During the period of funding cutbacks, universities responded by reducing personnel, implementing administrative efficiencies and securing new revenue sources. The challenges were difficult yet university faculty and staff met these challenges, undertaking new initiatives through innovation, striving all the while to try to provide students with the quality education all in Ontario had come to expect. They continue to do so.

Indeed, the efficiency and resourcefulness of Ontario universities were applauded again just recently, when the government-appointed Investing in Students Task Force gave Ontario's universities a "clean bill of health," noting that they are responsibly managed and cost efficient compared to other jurisdictions.

"The postsecondary sector will face many challenges as it tries to handle the record number of students who will soon enter the system – institutions are aging, faculty are retiring, and technology requirements are up." *It adds that "to fully meet the vision for postsecondary education, these pressures and others will need to be addressed."*

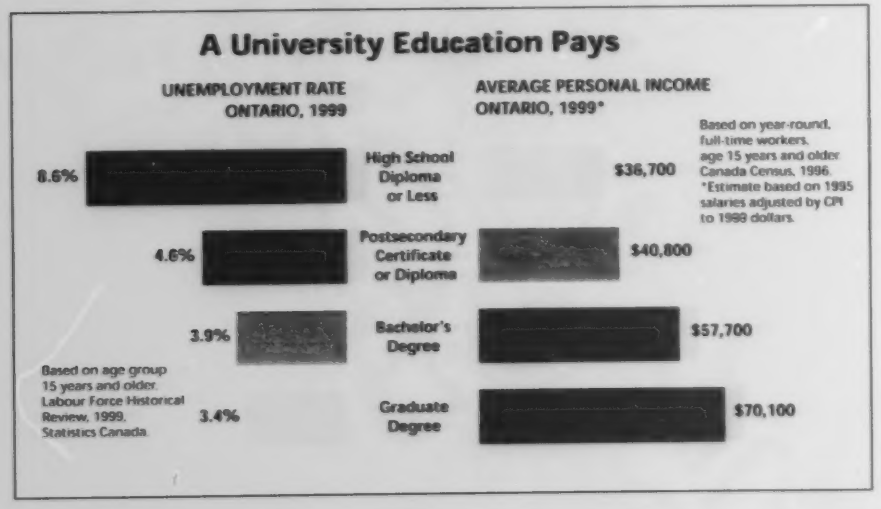
Universities Contribute to Employment in Ontario

Note: In Enterprise Canada's methodology, a "job" is defined as the equivalent of one person-year of full-time employment.

Component	Direct	Indirect	Total
Institutional expenditures	104,535	91,991	196,526
Out-of-province students: taxable personal expenditures	4,407	4,414	8,821
Commercialization/transfer of university research	1,342	1,077	2,419
Incremental expenditures by Ontario university graduates (1998 impact of a single year cohort)	7,592	3,796	11,389
Total "single year" job creation	117,876	101,279	**219,155**
Incremental earnings of Ontario university graduates (1998 impact of all years)	112,950	56,475	169,425
Total job creation in 1998 associated with the university sector*	223,234	153,790	**377,191**

**To prevent double-counting, the job creation associated with incremental earnings of university graduates (single year cohort) has been deducted from this total before adding in job creation associated with incremental earnings (all Ontario degree holders).*

Source: Enterprise Canada Research.


A University Education Pays
UNEMPLOYMENT RATE ONTARIO, 1999
AVERAGE PERSONAL INCOME ONTARIO, 1999*
Based on year-round, full-time workers, age 15 years and older. Canada Census, 1996.
*Estimate based on 1995 salaries adjusted by CPI to 1998 dollars.
8.6%
High School Diploma or Less
$36,700
4.6%
Postsecondary Certificate or Diploma
$40,800
3.9%
Bachelor's Degree
$57,700
3.4%
Graduate Degree
$70,100
Based on age group 15 years and older. Labour Force Historical Review, 1999. Statistics Canada.

THE RETURN ON INVESTMENT

Ontario universities are major contributors to economic growth and job creation in the province, directly or indirectly sustaining more than 375,000 jobs, according to the findings of a recent report by Enterprise Canada Research.

The report finds that expenditures on university education are more potent economic stimulants than expenditures on almost any other good or service. For every job created or sustained through expenditures made by a university, another 0.88 of a job is created by the ripple effect of those expenditures through the economy. The university sector generally provides more employment per dollar than any other sector. Its employment impact is almost double that of the health/social services sector, and

Universities Contribute to Employment in Ontario

Note: In Enterprise Canada's methodology, a "job" is defined as the equivalent of one person-year of full-time employment.

Component	Direct	Indirect	Total
Institutional expenditures	104,535	91,991	196,526
Out-of-province students: taxable personal expenditures	4,407	4,414	8,821
Commercialization/transfer of university research	1,342	1,077	2,419
Incremental expenditures by Ontario university graduates (1998 impact of a single year cohort)	7,592	3,796	11,389
Total "single year" job creation	117,876	101,279	**219,155**
Incremental earnings of Ontario university graduates (1998 impact of all years)	112,950	56,475	169,425
Total job creation in 1998 associated with the university sector*	223,234	153,790	**377,191**

**To prevent double-counting, the job creation associated with incremental earnings of university graduates (single year cohort) has been deducted from this total before adding in job creation associated with incremental earnings (all Ontario degree holders).*

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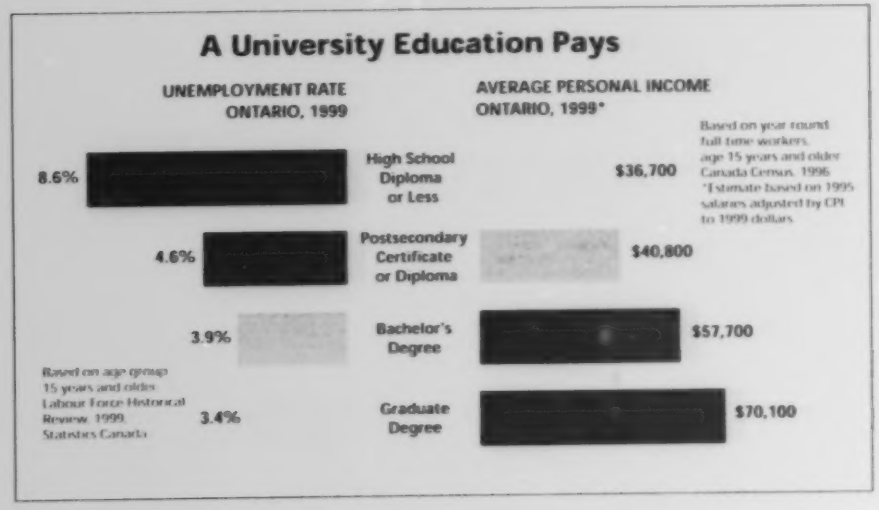
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almost twice as high as the business/computer service sector.

Ontario universities contribute $3.2 billion in taxes and other revenue, and stimulate more than $10 billion in economic activity as their spending circulates throughout the province. They also attract key investment capital to Ontario through their research and development initiatives.

The 2000-2001 Ontario University Graduate Survey found that employment rates continue to climb for university graduates. Graduates who have been out of university for two years are posting employment rates of 97.2%, while those six months out are employed at a rate of 94.6%. The numbers are relatively consistent across all disciplines. A university education is a sound investment. When considered as an "industry," the university sector is a significant employer. There are more people employed directly by Ontario universities (faculty and staff) than there are by the Canadian biotechnology sector or the country's aerospace industry. Yet fewer than one-quarter of the jobs generated or sustained by Ontario universities are found at the universities themselves. Most of the job creation from the investment in universities is spurred by the expenditures of faculty and staff, institutional spending on materials and goods, the taxable personal expenditures of out-of-province students, the economic activity arising from the commercialization/transfer of university research, and the additional earnings (and therefore expenditures) of university graduates relative to taxpayers/consumers with a high school education.

Ontarians receive a significant, tangible economic benefit from their long-term investment in Ontario universities – a benefit that is paid out annually to support economic growth and job creation in this province.

What is not so obvious is the benefit that accrues from basic research. It is not so immediate, but over the long term it can provide significant impact. The Ontario and Canadian governments have in recent years dramatically increased funding in research activities at universities, and the results are beginning to show. Using conservative estimates, Enterprise Canada found through economic activity generated by spin-off companies in a single year, the pre-production activity associated with licensing as well as the paid consulting carried out by faculty, that the direct and indirect inflow to the provincial treasury was $38.8 million in 1998 and that some 2,400 jobs were sustained by this economic activity.

The combination of learning effectiveness funding and the continuing increased commitment to facilities renewal and prospect of additional physical facilities will help Ontario universities provide a learning environment that meets the needs and expectations of Ontario's students and their parents.

MAINTAINING QUALITY FOR THE DOUBLE COHORT

When the growing numbers of students arrive on Ontario university campuses, they will be placing their trust and confidence in Ontario universities to provide the full range of experiences and resources that will challenge them academically and deepen their understanding of the world.

Highly qualified faculty; adequate academic and administrative support staff; classrooms, laboratories and libraries that are equipped with up-to-date resources; and well-maintained physical plants are central to maintaining the dynamic teaching and learning environment that results in an effective educational experience.

Ontario has made significant strides in helping to prepare for the double cohort and the increased student demand associated with growing participation rates and underlying demographics. SuperBuild capital and the multi-year commitment for growth have laid the foundation.

- Now we need to take steps to ensure that quality does not deteriorate – that we provide students with an effective learning experience. Achieving this goal will need a further substantial investment – in the order of $100 million per year. This investment should be allocated toward human and physical resources that directly support the quality of the teaching and learning environment. Funds would be used to hire faculty; purchase print and electronic library materials; provide up-to-date information technology equipment, laboratory equipment and the necessary infrastructure; and increase the number of staff to provide a host of services ranging from academic counselling to information technology support. This learning effectiveness funding could be increased each year and distributed in a way that addressed, over time, existing inequities in the funding of students. Each Ontario university, in its annual report, would provide a detailed accounting of the use of such funding and illustrate the improvements in the learning environment.
- In addition, money is needed to address the growing problem of deferred maintenance and additional physical facilities for teaching and research. As noted earlier, it is estimated that the required funding to address deferred maintenance is in the range of $240 million per year, not including required new facilities. Good progress could be made if the existing Facilities Renewal Fund were increased from $26.7 million to $100 million annually, as soon as fiscally possible.

While present day economic conditions present a challenge, it is important to maintain a focus on the future. An investment in the quality of learning experience that students receive at Ontario universities is an investment in the future economic well-being of the people of Ontario and this province.